Amendment to the Specification:

Please replace the paragraph [0023] beginning at page 9 with the following amended paragraph:

[0023] The streamwise thermal-gradient CCN chambers described here can generate a well-defined supersaturation to simulate cloud-formation in a controlled environment. The some notable features of these CCN chambers include:

1. **Temperature** ~~**temperature**~~ gradient in the streamwise direction generates the supersaturation by exploiting the difference in diffusion between heat and water vapor.

2. **Continuous** ~~**continuous**~~ flow allows fast sampling (1 Hz measurements), which is suitable for airborne measurements.

3. **Supersaturation** ~~**supersaturation**~~ is nearly constant at the centerline (for a constant and increasing temperature gradient), which maximizes droplet growth.

4. **Supersaturation** ~~**supersaturation**~~ is a function of **the** flow rate, **the** pressure and **the** temperature profile **inside the chamber**, which can be easily controlled and maintained.

5. **Simple** ~~**simple**~~ cylindrical geometry reduces size and minimizes buoyancy (or other secondary flow) effects.

The principle of the CCN chambers has been validated by controlled laboratory experiments and independent measurements.